

You may discuss these problems with your classmates, as it may be helpful to gain a good understanding of the topic. Nonetheless you should always submit your own work! *Use a word processor to answer these questions, attach this questions page to your answers.*

Question 1.

In your own words, explain in detail the steps that are followed in the “exception processing sequence”.

Question 2.

- a) What makes the reset exception different from any other exception?
- b) Explain in your own words the reset sequence for the MC32 system.

Question 3.

Explain in detail the interrupt handling sequence for the MC32.

Question 4.

Explain in your own words what the System Integration Module (SIM) is, what is its purpose, and how it interacts with the CPU32 in the MC32 microcontroller. Do some research in the literature (textbooks or internet) to backup your explanation. Mention your sources in a footnote.

Question 5.

In your own words explain what a kernel is in an operating system.

Question 6.

In your own words explain the two strategies for protecting critical sections (data structures or devices) in a multitasking environment.

Question 7.

Mention three examples of preemptive multitasking operating systems.